

Report to the Governor

CALIFORNIA
ENERGY
COMMISSION

POTENTIAL PEAKING POWER PLANT SITES IN CALIFORNIA

2001- 2003

STAFF REPORT

FEBRUARY 2001



Gray Davis, Governor

February 21, 2001

The Honorable Gray Davis
Governor, State of California
State Capitol Building
Sacramento, CA 95814

Dear Governor Davis:

The California Energy Commission hereby submits its report to the Governor on Potential Peaking Power Plant Sites in California. The report is submitted in response to the Governor's Executive Order D-26-01, issued February 8, 2001. The Order directs the California Energy Commission to "...conduct a study of potential peaking power plant sites in the state and prepare a report to the Governor by February 21, 2001, identifying those areas of the state that would benefit from the installation of peaking power plants to augment supplies and ensure reliability through the summer of 2003."

The report includes an inventory of sites statewide that, without compromising environmental quality, are expected to be suitable for peaking power plants which could serve peak demand between July 31, and December 30, 2003. In addition to the site inventory, the Energy Commission staff surveyed power plant developers to determine the availability of turbines which could be available by July 31, 2001, and have included the results of that survey.

The site inventory represents a work-in-progress and results of that work as of February 20, 2001. It will be updated periodically and the Energy Commission staff will be initiating more detailed studies of those sites that appear to be the most suitable for the installation of peaking power plants. These ongoing studies will help to ensure that sites identified can be approved using the Energy Commission's emergency siting process.

Sincerely,

WILLIAM J. KEESE

Enclosure

POTENTIAL PEAKING POWER PLANT SITES IN CALIFORNIA -- 2001 to 2003

INTRODUCTION

The purpose of this inventory is to identify sites statewide that, without compromising environmental quality, are expected to be suitable for peaking power plants to serve peak demand between July 31, 2001 and December 30, 2003. It was prepared in response to the Governor's Executive Order D-26-01, issued February 8, 2001. The Order directs the California Energy Commission to:

"...conduct a study of potential peaking power plant sites in the state and prepare a report to the Governor by February 21, 2001, identifying those areas of the state that would benefit from the installation of peaking power plants to augment supplies and ensure reliability through the summer of 2003."

The inventory represents a work-in-progress as of February 20, 2001. It will be updated periodically as sites already identified are screened and new sites are identified. The inventory is shown in two tables. Table 1 represents those sites that have met the final screening criteria and have a 95 percent or better probability of being permitted through the Energy Commission's emergency siting process, which was established by Public Resources Code Section 25705 and enacted by Executive Order D-26-01. Table 2 represents those sites that have met the preliminary screening criteria but have not been completely evaluated. As of February 20, 2001, Energy Commission staff identified 32 sites as meeting the site screening criteria. This represents a site inventory generating capacity of 1,700 to 3,400 megawatts (MW), assuming 50 to 100 MW of generation at each site. State-owned sites, military sites and sites in the Los Angeles basin are not yet available for screening but should add to available sites.

In preparing the inventory of sites, the Energy Commission staff sought the cooperation and assistance of the Department of General Services, the Resources Agency, the electricity, oil and gas industry, military base commanders, local government, and the California Independent System Operator (ISO).

In addition to the site inventory, this report includes a survey of developers with combustion turbines that could make their equipment available to be operational by July 31, 2001. An effort by the staff to match sites from the inventory with site developers and equipment providers is also underway.

STUDY METHOD

CATEGORIES OF POTENTIAL SITES

To conduct this study, the Energy Commission staff identified seven categories of potential sites. These included:

1. Existing power plant and substation sites -- sites that currently have operating power plants or transmission substations that could accept additional generation and be on-line by the summer 2001.
2. Developer proposed sites -- sites under consideration by power plant developers that could have schedules accelerated or capacity increased for this summer.
3. Oil and gas industry sites -- sites currently used in association with oil development or refinery activity, which were developed from responses to a survey of oil and gas company representatives conducted by the Resources Agency in late January 2001.
4. Past application sites -- sites previously evaluated by the Energy Commission while reviewing Applications for Certification that were either not developed or identified as alternatives to those proposals; these sites were analyzed from the data available at the Energy Commission and updated with respect to land use changes and other site information.
5. Local government sites -- sites local governments have identified for potential power plant development.
6. State owned sites -- sites owned by the State of California and managed by a number of State agencies where information on site characteristics was readily available.
7. Federal government sites -- sites located on Department of Defense lands or lands managed by other federal agencies where information on site characteristics was readily available.

The preliminary site screening focused on developing 50 to 100 MW ¹ natural gas-fired peaking power plants on the potential sites. Peaking power plants require a small amount of land (1 to 2 acres), little, if any, water supplies, and can be constructed in a relatively short time (60 to 120 days for a temporary facility, or 90 to 180 days for a larger permanent facility). Current peaking power plant technology results in low emissions that can be offset through air pollution control district emission offset or mitigation banks. Since the primary purpose of these facilities is to provide electricity and greater system reliability in the major electricity load centers during periods of high demand, these relatively small power plants can be

¹ A megawatt is equivalent to the electricity used by approximately 1,000 homes. Most power plants currently being proposed are large baseload power plants capable of generating 500 to 1,000 megawatts of electricity that typically require 18 to 24 months for construction.

dispersed over a number of sites in a manner that is more compatible with surrounding land uses, protects public health and safety, and maintains environmental quality.

In surveying potential sites in each of the seven categories, the Energy Commission staff found that most respondents assumed that a traditional 12-month siting process would be used for the peaking projects. When they were informed that an accelerated siting process was being developed, the respondents were interested in considering additional capacity for planned projects or significant acceleration of their planned on-line dates.

AREAS THAT WOULD BENEFIT FROM PEAKING POWER PLANTS

The Energy Commission staff's preliminary screening sought to identify those areas of the State that would most benefit from the installation of power plants during the critical period between July 31, 2001 and December 30, 2003, and best serve the peak demand during that period.

In identifying the areas that would benefit from the installation of peaking power plants, the Energy Commission staff divided the State into Northern and Southern California, based on the primary transmission constraint in the State – Path 15. Northern California, from a transmission perspective, is the area north of the Midway substation (the southern terminus of Path 15) and Bakersfield. Southern California is the area to the south of the Midway Substation.

In Northern California, the San Francisco Bay Area and Southern Sacramento / Northern San Joaquin Valleys were identified as the most critical areas from a system reliability perspective, and that would benefit from the addition of peaking power plants (Figure 1). In the Bay Area, anywhere north of the Martin substation in south San Francisco is an excellent area for the addition of peaking power due to the low generating capacity in that area and the limited transfer capability into the area over the existing transmission system. The San Francisco Peninsula south of the Martin substation and southern end of the San Francisco Bay is also a good area for adding peaking plants, specifically near the Newark or Metcalf substations, due to the high electricity load growth that has occurred in that area in recent years.

In the Central Valley, the area from Sacramento south to the Tesla and Tracy substations was identified as a good area for the addition of peaking power plants. The addition of peaking power in this area will help the San Francisco Bay Area as well as the Sacramento and San Joaquin load centers. While not a major load center, the corridor along Path 15 is an area that would also benefit from peaking power plants because generation in this area could serve peak demand to the north.

In Southern California, the San Diego area is the most critical area; however, the Los Angeles Basin area is considered a less critical area this summer. The San Diego area is defined by San Onofre in the north and the Miguel substation in the south and east. The Energy Commission staff performed a transmission power-flow analyses of the San Diego area and concluded, strictly from an electricity system

perspective, that any peaking power plants added in this area would be beneficial in serving peak demand and could be accommodated by the electricity system without system upgrades. However, the backbone natural gas system in the San Diego area is at its limit, and any significant additional demand for natural gas, such as power plant additions, will require gas system upgrades. Alternatively, some plants could be added that would operate on distillate fuel if they received the appropriate air permits and had increased air emission offsets available. While there seem to be a number of suitable sites in the San Diego area from an electricity system perspective, the fuel supply and air permit questions will need to be addressed to pursue development.

While the Los Angeles area is less critical from a reliability concern than the other three areas in the state, additional projects in that area would be beneficial. The Los Angeles area is defined by the Lugo and Devers substations in the east and the Pacific Ocean in the west (Figure 1). The electricity system in this area is considered very robust internally and should be able to handle added generation.

SITE SCREENING

The Energy Commission staff conducted the site screening process at two levels (Figure 2). The first level in site screening was based on identifying sites located in or near the areas that would benefit from additional peaking facilities this summer. Using this criteria, the staff screened over 400 potential sites in all of the site categories down to a more manageable 140 potential sites located in the critical areas.

The second level in site screening was based on site characteristics that were considered vital to developing a peaking power plant at a site by this summer. These criteria included the following:

- Sufficient land (2 acres or more) to accommodate a peaking power plant of 50 MW or greater.
- Adequate transmission capacity at or near the site -- this requires at least 60 kilovolts (kv) transmission facilities at or near the site, but 115kv or greater is preferred.
- Adequate natural gas fuel supply at or near (within 1 mile) of the site. (Appendix B discusses the availability of natural gas at the backbone system level for the Pacific Gas and Electric Company, Southern California Gas Company (SoCalGas), and the San Diego Gas and Electric Company service areas.)
- Availability of emissions offsets in the area -- this factor along with Best Available Control Technology (BACT) requirements will be critical in matching turbines to a site since each air district may treat offsets and BACT differently.

FIGURE 1

AREAS BENEFITTING AND SITES FOR THE INSTALLATION OF PEAKING POWER PLANTS

2001 - 2003

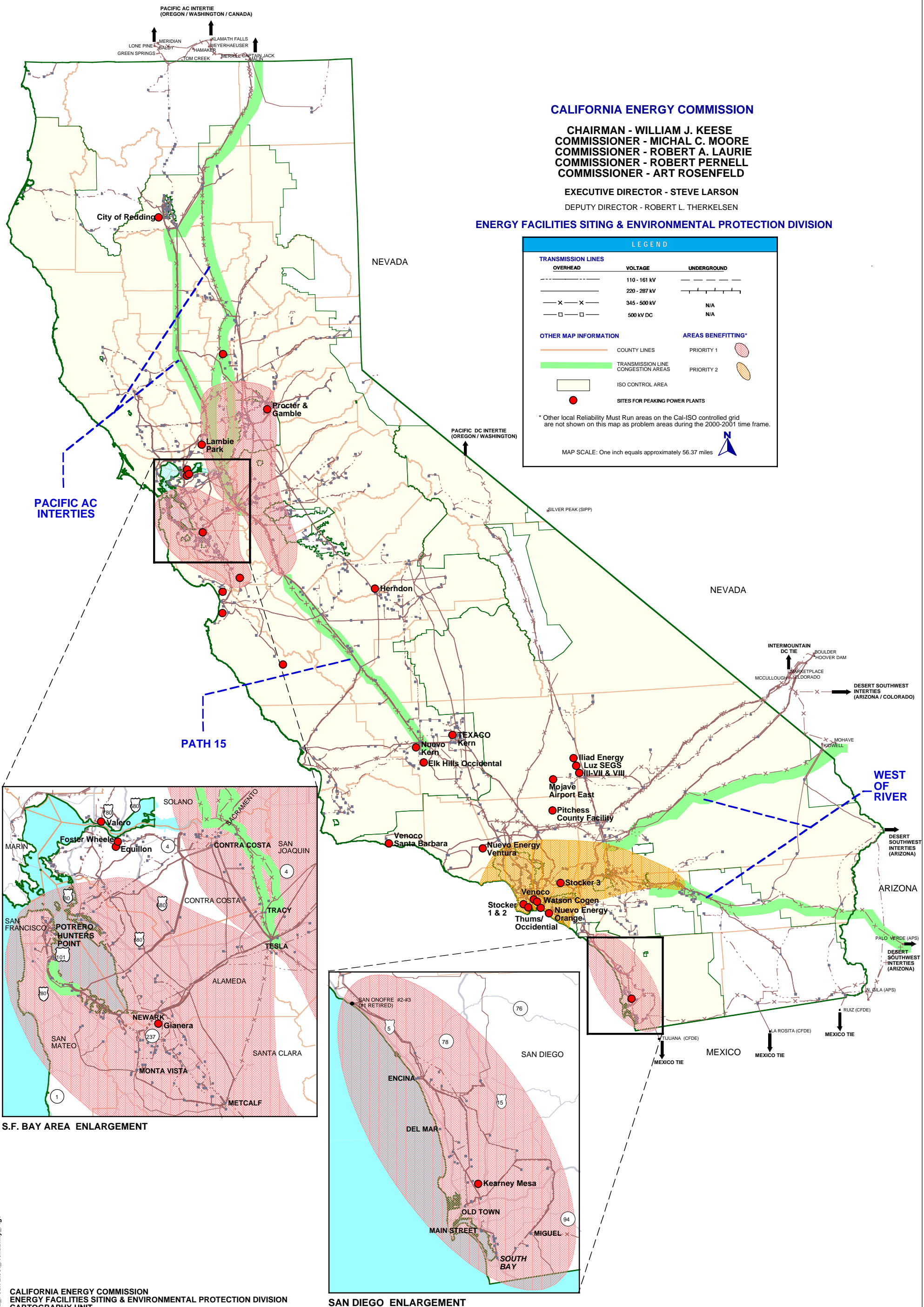
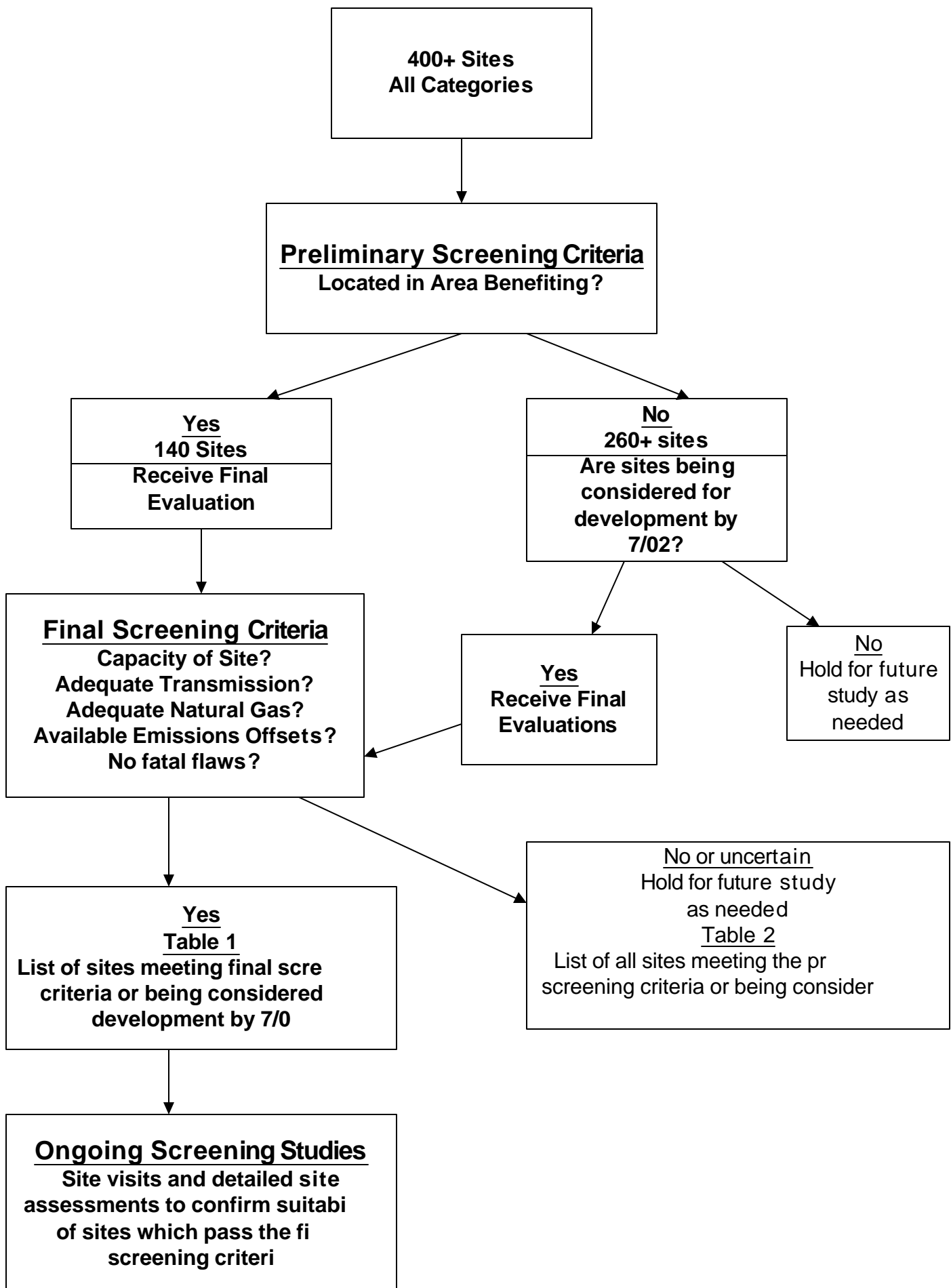


FIGURE 2. PEAKING POWER PLANT SITE SCREENING



- Lack of known or potential fatal flaws in using the site – this included significant land-use restrictions, close proximity of sensitive receptors such as hospitals, or endangered species.

In addition to these site screening criteria, information on turbines and other equipment was collected where available for each site. This information included the following: the availability of a turbine or other equipment, the NOx emissions of the turbine, the identification of any incentives that would help in development of a project and the identification of the contact person(s) providing the information on the site and equipment.

Of the 140 potential sites identified in the preliminary screening, as of February 20, 2001, 32 sites were identified as meeting these second level site screening criteria. The characteristics for these 32 sites are shown in Table 1 and their locations in Figure 1. These 32 sites represent those sites that have a 95 percent or better probability of being permitted using the Energy Commission's emergency siting process, and assumes that turbines are available for installation at these sites which can meet the 5-9 parts per million (ppm) NOx emissions which will meet the air district definition of BACT.

STUDY RESULTS

As of February 20, 2001, the Energy Commission staff identified 32 sites as meeting the site screening criteria. This represents a site inventory generating capacity of 1,700 to 3,400 MW, assuming 50 to 100 MW of generation at each site. State-owned sites, military sites, and sites in the Los Angeles basin are not yet available for screening but should add to available sites. The site screening effort is continuing, and additional sites will be added to the inventory as progress is made. The number of sites which have been identified as meeting the criteria, and the total capacity for these sites, currently exceeds the July 31, 2001 - 1000 MW peaking site goal established for the study. However, the Energy Commission staff will continue to pursue siting opportunities in and outside the critical areas and evaluate further suggestions brought forward by developers, local government and others. In addition, the Energy Commission will also seek to identify potential sites for larger baseload power plants.

With respect to natural gas, Appendix B provides an analysis of availability. Enough "backbone" natural gas pipeline capacity is available to serve these peaking power plants located in both the San Francisco Bay area and the Central Valley. However, under very cold temperature days, non-core customers, including current electric generation load, cannot be served at 100 percent. Any additional natural gas load from peaking power plants during very cold winter days cannot be served. If these peaking power plants are primarily used during the summer months when natural gas load typically falls from higher winter use, the risk of PG&E not being able to serve these power plants is less.

In the SoCalGas territory there is more than enough “backbone” natural gas pipeline capacity to serve the peak daily gas use for these peaking power plants. Local distribution pipeline capacity appears to be adequate to serve the additional load of these peaking power plants according to SoCalGas. However, certain regions in the SoCalGas service area are constrained. These include the Imperial Valley and San Joaquin Valley near Visalia. Peaking power plants that would be located in the Los Angeles area, east of Los Angeles towards the desert and in Santa Barbara, do not fall in the supply-constrained regions.

In the San Diego area, the supply of natural gas is very limited and makes identification of sites in the area questionable. The one site identified in San Diego has an existing supply of natural gas and would not add to the demand for natural gas.

TURBINE AVAILABILITY SURVEY

The Energy Commission staff is currently surveying the industry for available combustion turbines suited to operate in California as peaking units. To meet the goal of an additional 1000 MW of peaking capacity on-line by July 31, 2001, the staff is concentrating on locating combustion turbines in the capacity range of 20 to 50 MW with emission levels less than 25 ppm NOx.

Turbines with less than 25 ppm NOx are available within the time frame identified. Used combustion turbines meeting the 25 ppm emissions objective are more plentiful than new combustion turbines. However, it appears that there are enough combustion turbines with acceptable emission levels to meet the 1,000 MW goal by July 31, 2001. This is in addition to the 1,281 MW of ISO summer reliability generation. The ISO projects have identified both combustion turbines and reciprocating engines to meet their capacity goal of 1,281 MW. The Energy Commission staff is confident, based on personal communication with Electricity Oversight Board staff and comments from the turbine suppliers, that the combustion turbines identified in the ISO projects are not being double-counted in our inventory.

While diesel fueled reciprocating engines have been offered by some interested parties, a diesel fueled option for the emergency peaking power plants is currently not being considered by Energy Commission staff.

The following combustion turbines have been identified as available as of February 20, 2001:

- two new Rolls Royce RB 211 units, 30 MW each,
- 18 new GE LM 6000 units, 47.5 MW each,
- one new 120 MW unit, and

- 30 used combustion turbines ranging from 35 to 100 MW each (emissions data are being researched for these units).

A comparison of generating unit characteristics is included as Appendix A. The comparison contrasts the operating characteristics and requirements of a new 500 MW combined-cycle, base load combustion turbine with two 50 MW simple-cycle combustion turbine peaking units, new with Selective Catalytic Reduction (SCR) emissions control and used without SCR, and a diesel internal combustion engine peaking unit.

ONGOING SCREENING STUDIES

As noted above, the Energy Commission staff will continue to screen sites as information is received from agencies and developers. Through this process staff will continue to identify sites with a 95 percent confidence of approval using the Energy Commission's emergency siting process.

In addition to this screening process, Energy Commission staff will immediately begin conducting more detailed studies of those sites that have passed the final screening criteria. This work will be important to ensure that these sites can be approved using the Energy Commission's emergency siting process and communicate siting and environmental information with local agencies which may be permitting peaking power plants.

In this phase of the work, Energy Commission staff will perform site visits, conduct a more detailed environmental review for each site and contact local agencies with sites within their jurisdiction. Staff will work with the local agencies to identify site characteristics, potential land use and other issues from the agencies' perspective, and discuss the emergency siting process.

Table 1
Peaking Power Plant Sites
Meeting Final Screening Criteria

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmission. (voltage)	Natural Gas Adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
Existing Power Plant and Substation Sites									
Northern California									
Procter & Gamble (Sacramento)	50 MW, 100 MW with issues.	Onsite	Yes for 50 MW; engineering issues for 100 MW	No Turbine Adequate Acreage		No	ERCs, Equipment, financing	Equipment (turbine) acquisition	SMUD Bob Nelson (916) 732-5139
Proprietary ¹ (SF Bay Area)	276 MW (6 units @ 46 MW each)	Onsite	Onsite	Turbine Available Adequate acreage	Turbine can meet 9 ppm Nox. No Offsets	No	Faster Permitting & Tax incentives	-Permits -T-line & gas conn.	Calpine Jim Macias, VP (925) 600-2306
Proprietary (SF Bay Area)	46 MW	Onsite	Onsite	Turbine Available Adequate acreage	Turbine can meet 9 ppm Nox. No Offsets	No	Faster Permitting & Tax incentives	-Permits -T-line & gas conn.	Calpine Jim Macias, VP (925) 600-2306
Herndon, Fresno (Fresno)	~ 100 MW at 115 kV	Onsite	Yes	Turbine Available Adequate acreage	Turbine can meet 9 ppm Nox	No		None	PG&E Paul Sivley (415)-973-5652 Michael O'brien (415)-973-2789
San Diego									
The supply of natural gas in San Diego is very limited and makes all potential sites in the area questionable. Diesel fuel turbines may be an option.									

¹ Shading indicates turbine available for site.

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmission. (voltage)	Natural Gas Adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
Southern California									
Inland Paperboard and Packaging (Ontario)	100 + MW 10-12 Acres	66 kV and 220 kV onsite	Onsite	No Turbine Adequate Acreage		No	Arrangement with developer	-Permits -Equipment acquisition	Inland Container Corporation (909) 292-1055 *Art Martin Engineering & Maintenance Manager (909) 292-7359
Mountainview Power Company (San Bernardino)	100 MW	66 kV lines onsite	Onsite – Capacity unknown	No Turbine Adequate Acreage		No		-Permits -Payments	Thermo Ecotek Tony Wetzel, (916) 677-1717
Watson Cogeneration (Kern)	80 MW	Onsite	Onsite	Uncertain		No	Waive ERC requirement	-Turbine acquisition -building contractor	Patrick King Exec Director (310) 816-1721
Luz SEGS VIII– Harper (San Bernardino)	250 MW	Onsite	Onsite	Uncertain		May be t-line constraints, staff is evaluating	Waive ERC requirement	-Turbine acquisition -Building contractor	Florida Power & Light Darrel Grant (561) 691-7099
Luz SEGS III-VII– Kramer (San Bernardino)	150 MW	Onsite	Onsite	Uncertain		May be t-line constraints, staff is evaluating	Waive ERC requirement	-Turbine acquisition -Building contractor	Dave Rib, Plant Manager (760) 762-5562 x246
Developer Proposed Sites									
Northern California									
Proprietary (Sacramento Valley)	45 MW	May need minimal line	May need minimal line	Turbine Available Adequate acreage	Yes Unknown	No	Capacity payments, energy payment based on fuel cost		Calpine Jim Macias, VP (925) 600-2306
Proprietary (SF Bay Area)	135 MW	May need minimal line	May need minimal line	Turbine Available Adequate acreage	Yes Unknown	No	Capacity payments, energy payment based on fuel cost		Calpine Jim Macias, VP (925) 600-2306

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmission. (voltage)	Natural Gas Adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
Lambie Industrial Park (Solano)	100 + MW loop into 230 kV line	Yes, .3 miles to 230 kV	Yes, 1 mile	Turbine Available Adequate acreage	Yes Unknown	No		Turbine delivery July 2001	Sterling Energy Hal Mitchell (619) 252-0605
Proprietary (Monterey)	50-100 MW	115 kV	Yes	Maybe Adequate acreage		No			Phil Consiglio (818) 842-2020
San Diego									
San Diego, Kearney (San Diego)	50 MW	Yes	Onsite	Turbine Available Adequate acreage	Yes, current permits	No		Currently operating but not grid connected	Developer determining whether they will participate
Southern California									
Central CA, Location Proprietary	190 MW	Adjacent to site	Yes	Turbine Available Adequate acreage		No		Appears to be discussing base load facility	Lloyd Prevost (818) 899-8682
Mojave Airport (East San Bernardino)	180 MW	No	Maybe	Turbine Available Adequate acreage		T-line		Working with Phil Zimmerman	Lloyd Prevost (818) 899-8682
Iliad Energy Harper Lake (San Bernardino)	80+MW in 2001 750 MW in 2002	Onsite	Onsite	Turbine Available Adequate acreage	LM6000s	May be t-line constraints, staff is evaluating		Investigating possible options for 2001 peak project but interested in 2002 for long term contract	Iliad Energy Michael Haws, President (918) 493-4909

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmission. (voltage)	Natural Gas Adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
Oil and Gas Industry Sites									
Northern California									
Equillon Martinez (Martinez)	100 MW or more	115 KV PG&E line is adjacent	Equillon believes adequate gas supplies are available from PG&E Pipelines.	No Turbine Adequate Acreage		No	Guaranteed profit margin of 20 to 25%. Pricing in the range of \$250 to \$750 per MWH.	Payment guarantees, availability of turbines and permitting.	Janet Okio (925) 313-3102
Valero Refinery (Benicia)	50-100 MW	Adjacent	Onsite, some gas from refinery	Turbine Available Adequate acreage	Yes/Yes	No		Working with Calpine as partner	Richard Marcogliese (707) 745-7724
San Diego									
Southern California									
Elk Hills Occidental (Kern)	45 MW	Onsite	Onsite	No Turbine Adequate Acreage		No		Turbine availability	Jeff Hanig (713) 215-7765
Nuevo Energy (Kern)	50-100 MW	Onsite	Onsite	No Turbine Adequate Acreage		No		Turbine availability Has letter of intent for ~100 MW	Dale Harper (713) 374-4865
Texaco (Kern)	100 MW	Onsite	Onsite	Turbine Available Adequate acreage	Yes	No		Turbine availability Working with GE on LM 2500	Paul Pilger (661) 864-3124
Stocker 1 (Los Angeles)	50-100 MW	Onsite	Onsite	No Turbine Adequate Acreage		No	Natural Gas price	Turbine and equipment acquisition.	Steve Rusch (323) 298-2223
Stocker 2 (Los Angeles)	50-100 MW	Onsite	Onsite	No Turbine Adequate Acreage		No		Turbine and equipment acquisition.	Steve Rusch (323) 298-2223

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmission. (voltage)	Natural Gas Adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
Stocker 3 (Los Angeles)	50-100 MW	Onsite	Onsite	No Turbine Adequate Acreage		No		Turbine and equipment acquisition.	Steve Rusch (323) 298-2223
Nuevo Energy (Orange)	50-100 MW	Onsite	Onsite	No Turbine Adequate Acreage		No		Turbine acquisition	Dale Harper (713) 374-4865
Nuevo Energy (Ventura)	50-100 MW	Onsite	Onsite	No Turbine Adequate Acreage		No		Turbine acquisition	Dale Harper (713) 374-4865
Thums/ Occidental Port of Long Beach (Long Beach)	50+ (49.9) MW	Onsite	Onsite	???? Adequate Acreage		No		Negative Declaration granted by City of Long Beach 2/01	Jeff Hanig (713) 215-7765
Venoco (Santa Barbara)	50-100 MW	Onsite	Onsite	No Turbine Adequate Acreage		No		Turbine acquisition	Rod Eson (805) 966-9980
Venoco (Ventura)	50-100	Onsite	Onsite	No Turbine Adequate Acreage		No		Turbine acquisition	Rod Eson (805) 966-9980

Past Application Sites

To avoid duplication, these sites are represented in other categories.

Local Government Sites

Northern California									
City of Santa Clara Gianera Substation (Santa Clara)	100 MW	Onsite	400 feet	2 LM6000s expected delivery 4/01 Adequate Acreage	Yes	No	Expedite ARB/CEC approval		Ron Davis, Principal Consultant (916) 961-5938
City of Redding (Redding)	43 MW In Process Could add 50-100 MW	Yes	Yes	Yes, 43 MW ordered. Adequate Acreage		No	Waiting for ARB permits	Permitting and building	Pat Keener (530) 245 7244
San Diego									

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmission. (voltage)	Natural Gas Adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
Southern California									
Pitchess Cogeneration (Los Angeles Co. Pitchess Honor Farm)	50 MW	66kV Onsite	Onsite	No Turbine Adequate Acreage		No		-Permits -equipment acquisition	*Howard Choy Director of Energy Management (323) 881-3939 *Jim Van Zuilen Manager of Power Plants (323) 267-2254

Table 2
Peaking Power Plant Sites
Meeting Preliminary Screening Criteria

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmiss. (voltage)	Natural Gas adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
Existing Power Plant and Substation Sites									
Northern California									
Proprietary (SF Bay Area)	276 MW (6 units @ 46 MW each)	Onsite	Onsite	Turbine available Adequate acreage	Turbine can meet 9 ppm Nox. No Offsets	No	Faster Permitting & Tax incentives	-Permits -T-line & gas connection	Calpine Jim Macias, VP (925) 600-2306
Proprietary (Sacramento Valley)	45 MW	Yes, may need minimal line	Yes, may need minimal line	Turbine available Adequate acreage	Yes SCR	No	Capacity payments, energy payment based on fuel cost		Calpine Jim Macias, VP (925)600-2306
Proprietary (SF Bay Area)	46 MW	Onsite	Onsite	Turbine available Adequate acreage	Turbine can meet 9 ppm Nox. No Offsets	No	Faster Permitting & Tax incentives	-Permits -T-line & gas connection	Calpine Jim Macias, VP (925) 600-2306
Procter & Gamble (Sacramento)	50 MW, 100 MW with issues.	Yes	Yes for 50; engineering issues for 100	No Adequate acreage		No	ERCs, Equipment, financing	Equipment (turbine) acquisition	SMUD Bob Nelson (916) 732-5139
Campbell Soup (Sacramento)	No space available			No No space available		Space constraint			SMUD Bob Nelson (916) 732-5139
Carson Ice (Sacramento)	None. T-line Constraint			No Adequate acreage		T-line Constraint			SMUD Bob Nelson (916) 732-5139

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmiss. (voltage)	Natural Gas adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
Basic American (Monterey)	None			No No space available					Calpine Jim Macias, Vice-Pres. (925) 600-2306.
Crockett Cogeneration (Contra Costa)	None, space constraint	230 KV PG&E transmission line is loaded to limit of 260 MW	NG delivery from PG&E is limited, barely meeting existing plant needs	No turbine No space available		Space, t-line and gas Constraint			John Walsh, General Manager (510) 787-4100
SMUD Rancho Seco Plant (Sacramento)	1000 MW		Nearby	No turbine Adequate acreage		Endang. Fairy Shrimp	ERCs, Fairy Shrimp exemption	ERCs, Fairy Shrimp exemption	Collin Taylor 916 732 6153
Oakland (Alameda)	No space available	110-161 kV close to site	Onsite	No turbine No space available		No space available			Duke Energy
Electra (Amador)	Flat site available	220-287 kV close to site Apprx 0.5 mile 60-92 kV	Apprx 8 miles to site	No turbine Adequate acreage		Distance to gas line			PG&E Paul Sivley 415-973-5652 Michael O'brien 415-973-2789
Salt Springs (Amador)	Confined rugged site	110-161 kV close to site	No, Apprx 35 miles to site	No turbine Adequate acreage		Distance to gas line			PG&E Paul Sivley 415-973-5652 Michael O'brien 415-973-2789
Tiger Creek (Amador)	Confined rugged site	110-161 kV and 220-287 kV close to site Apprx 4 miles to 60-92 kV	No, Apprx 35 miles to site	No turbine No space available		Distance to gas line			PG&E Paul Sivley 415-973-5652 Michael O'brien 415-973-2789

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmiss. (voltage)	Natural Gas adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
Woodleaf (Butte)		110-161 kV close to site. Apprx 5 miles to 60-92 kV	No, Apprx 25 miles to site	No turbine Adequate acreage		Distance to gas line			OWID
Pittsburg Power Plant (Contra Costa) Southern Energy Delta LLC ("Mirant" new name)	2100 acre-site, only half of which was sold by PG&E Co.	230 kV and 115 kV access onsite. There are transmission constraints due to the heavy loading.	Onsite	Turbine available. But mostly for larger plants.	No	No	Equipment availability. A long-term contract. A longer development schedule.	Equipment procurement . Construction schedule. Mirant thought a time frame of 8-9 months might be feasible.	Mark Gouveia, Director of Operations, (925) 287-3122 Jum Shanalov, (925) 287-3133 *Mark Harrer (925) 287-3121 Joe Bitner – Plant Manager (925) 427-3500
Coalinga Cogeneration Company (Fresno)	2.5 acres available; 100 MW?	Constrained for six months	Onsite	No Adequate acreage		T-line constraint, water availability	Profit guarantee		Bruce Linsten (559) 935-8765
Kings River (Fresno)	Flat site	110-161 kV and 220- 287 kV close.	No; about 27 miles from the site	No turbine Adequate acreage		Distance to gas line			PG&E Paul Sivley 415-973-5652 Michael O'brien 415-973-2789
Humboldt Bay (Humboldt)	~50 MW	Onsite 115 kV 70 MW capacity in or out.	Gas supply is limited and interruptable	15 MW diesel fueled mobile unit onsite ready to set-up.	No	Limited gas supply			Tom Moulia (707) 444-0731 Roy Willis- (707) 444-0771
Calistoga Geothermal Partners, L.P. (Lake)	Power plant approx. 15 – 20 acres Overall site 23,000 acres.	60-92 kV close to site	2 miles from the site	No turbine Adequate acreage		Distance to gas line			
Sonoma, Calpine Geyser (Lake)	23,000 acres.	110-161 kV and 220- 287 kV close to site	No, approx. 8 miles from the site	No turbine Adequate acreage		Distance to gas line			

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmiss. (voltage)	Natural Gas adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
New Exchequer (Mariposa)	7,109 acres	230 kV close to site	No, 22 miles from the site	No turbine Adequate acreage		Distance to gas line			MID
Moss Landing (Monterey)	Flat space available, approx. 400 – 480 acres	Onsite 230 kV, 500 kV, and major switchyard	Onsite	No turbine Adequate acreage		Building plant addition			Duke Energy
Salinas River CoGen (Monterey)	No space available	60-92 kV and 110-161 kV close to site, T-line constrained	Limited gas supply	No turbine No space available		Yes, No land, t-line constrained and natural gas limited		More land is needed. Maybe it could be obtained from Texaco.	Dennis Campbell Plant Supervisor (661) 392-2741
Sargent Canyon CoGen (Monterey)	No space available	T-line constrained	Limited gas	No turbine No space available		Yes, land, t-line and fuel constraints.	N/A	More land needed could be leased from Texaco?	Dennis Campbell Plant Super.r (661) 392-2741
Drum 1 (Placer)	Confined site	Onsite 115 kV	No, approx. 13 miles from site	No turbine No space available		Distance to gas line			PG&E Paul Sivley 415-973-5652 Michael O'brien 415-973-2789
Drum 2 (Placer)	Confined site	Onsite 115 kV	No, approx. 13 miles from site	No turbine No space available		Distance to gas line			PG&E Paul Sivley 415-973-5652 Michael O'brien 415-973-2789
Ralston (Placer)	Confined site	60-92 kV close to site	No, approx 25 miles from site	No turbine No space available		Distance to gas line			Placer County Water Agency
Bucks Creek (Plumas)	Confined site	Onsite 115 kV and 230 kV	No, approx. 22 miles from site	No turbine No space available		Distance to gas line			PG&E Paul Sivley 415-973-5652 Michael O'brien 415-973-2789

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmiss. (voltage)	Natural Gas adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
Butt Valley (Plumas)	Gentle terrain, difficult access	Onsite 115 kV	No, approx. 38 miles from site	No turbine No space available		Distance to gas line			PG&E Paul Sivley 415-973-5652 Michael O'brien 415-973-2789
Caribou 1 (Plumas)	Confined site, difficult access	Onsite 115 kV and 230 kV	No, approx. 37 miles from site	No turbine No space available		Distance to gas line			PG&E Paul Sivley 415-973-5652 Michael O'brien 415-973-2789
Cresta (Plumas)	Flat space available	Onsite 230 kV	No, approx. 38 miles from site	No turbine Adequate acreage		Distance to gas line			PG&E Paul Sivley 415-973-5652 Michael O'brien 415-973-2789
Hunters Point (San Francisco)	Space available	Onsite 230 kV	Onsite	No turbine Adequate acreage		Agreement between city and PG&E to shut down plant when possible.			Mike Jones (415) 695-2200
Port of Stockton District Energy (San Joaquin)	5.5 acres; 4.6 acres used for inventory storage; next door is five acres in the port of Stockton			No turbine Adequate acreage		Space is constrained			
Ripon CoGeneration (San Joaquin)	Lots of undeveloped land adjacent that could be bought from Fox River Paper Company								Scott Dibbs Plant Manager (713)552-2139
San Joaquin CoGen (San Joaquin)									Clark Mower El Paso Power (303) 215-5413

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmiss. (voltage)	Natural Gas adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
Stockton CoGen Company (San Joaquin)	13 acres with 7.5 acres available	60-92 kV, 110-161 kV 220-287 kV close to site	2 miles	No turbine Adequate acreage		Distance to gas line			
Morro Bay (San Louis Obispo)	107 acres	Onsite 230 kV	Onsite	No turbine Adequate acreage		Community resistance			Duke Energy
Gilroy Cogeneration (Santa Clara)	270 MW	May require T-line upgrade	Onsite	Turbine available Adequate acreage		No			Calpine Jim Macias, Vice President of Assets (925) 600-2306
Pit 1 (Shasta)	Confined site	Onsite 230 kV	Approx 5 miles	No turbine No space available		Confined site			PG&E Paul Sivley 415-973-5652 Michael O'brien 415-973-2789
Pit 3 (Shasta)	Possible sites for peaking units.	Onsite 230 kV	Approx 8 miles	No turbine Adequate acreage		Distance to gas line			PG&E Paul Sivley 415-973-5652 Michael O'brien 415-973-2789
Pit 4 (Shasta)	Possible sites for peaking units.	Onsite 230 kV	Approx 12 miles	No turbine Adequate acreage		Distance to gas line			PG&E Paul Sivley 415-973-5652 Michael O'brien 415-973-2789
Pit 6 (Shasta)	Confined site	Onsite 230 kV	Approx 17 miles	No turbine No space available		Confined site			PG&E Paul Sivley 415-973-5652 Michael O'brien 415-973-2789
Yuba City CoGen (Sutter)	No space available	Onsite 115 kV.	Onsite	No turbine No space available		No space available			Wellhead Electric Co. Ken Salvagno, VP (916) 447-5171

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmiss. (voltage)	Natural Gas adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
Donnels (Tuolumne)		Onsite		No turbine No space available					Tri-Dam
Stanislaus (Tuolumne)	Confined site	Onsite 115 kV		No turbine No space available		Confined site			PG&E Paul Sivley 415-973-5652 Michael O'brien 415-973-2789
New Narrows (Yuba)	Confined site	Onsite	Approx. 7 miles to the site			Distance to gas line			Yuba County Water Agency
Calpine Pittsburg (Contra Costa)		60-92 kV, 110-161 kV, and 220- 287 kV close to site	Onsite			No			Calpine Ed Warner, Operation Manager, (925) 431-1323
Contra Costa Power Plant Southern Energy Delta LLC Mirant (Contra Costa)	198-acres ; Room for additional units.	115 kV and 230 kV	Onsite	Turbine available Adequate acreage	No	No	Equipment availability. A long-term contract. A longer development schedule.	Equipment procurement . Construction schedule.	Mirant (Southern Co.) Walnut Creek. Mark Gouveia, Director of Operations, (925) 287-3122 Jum Shanalov, (925) 287-3133 *Mark Harrer (925) 287-3121 Joe Bitner – Plant Manager (925) 427-3500
Martin, Brisbane (San Mateo)	50 to 91 MW	Yes: 100 ft	Yes: 860 ft	Turbine available Adequate acreage	Yes	Past Litigation w/ Midway Village community	Negotiable	Community resistance	PG&E Paul Sivley 415-973-5652 Michael O'brien 415-973-2789
San Mateo substation (San Mateo)	100 MW	100 feet	2,875 feet	No turbine Adequate acreage		Community resistance			PG&E Paul Sivley 415-973-5652 Michael O'brien 415-973-2789

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmiss. (voltage)	Natural Gas adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
Tesla substation (Tracy)	100 +	Adjacent	1000 feet	No turbine 49 Acres					AFC (Metcalf alternative 5)
Vinyard, Pleasanton (Alameda)	~ 100 MW at 115 kV	Yes	Yes	Turbine available Adequate acreage	Yes	Community resistance	Negotiable	Land and permitting	PG&E Paul Sivley 415-973-5652 Michael O'brien 415-973-2789
Herndon, Fresno (Fresno)	~ 100 MW at 115 kV	Yes	Yes	Turbine available Adequate acreage	Yes	No	Negotiable	None	PG&E Paul Sivley 415-973-5652 Michael O'brien 415-973-2789
SMUD Elverta substation (Sacramento)	300 MW	May need more	Nearby	No turbine Adequate acreage		Fairy Shrimp	ERCs, Fairy Shrimp exemption	ERCs, Fairy Shrimp exemption	Collin Taylor 916 732 6153
SMUD Cal-Expo substation (Sacramento)	100 MW	Yes	Nearby	No turbine Adequate acreage		Fairy Shrimp	ERCs, Fairy Shrimp exemption	ERCs, Fairy Shrimp exemption	Collin Taylor 916 732 6153
Warnerville substation (Stanislaus)	100 MW	Onsite	9.2 mile line required	No turbine Adequate acreage		Distance to gas line			AFC
East Shore substation (Hayward)	100 MW	Onsite	2,500 foot line required	No turbine Adequate acreage		Application withdrawn from CEC			AFC
Newark substation (Alameda)	50 MW	Onsite	1.2 mile line required	No turbine Adequate acreage		Application withdrawn from CEC			AFC
Proprietary (Solano)	100 + MW loop into 230 kV line	Yes	Yes	Turbine available Adequate acreage	Yes	No	Negotiable	No PG&E land	Proprietary

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmiss. (voltage)	Natural Gas adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
San Diego									
The supply of natural gas in San Diego is very limited and makes all potential sites in the area infeasible. Diesel fuel turbines may be an option.									
Kearney (San Diego)	100 MW	Yes	Line Adjacent- No Gas	No turbine		Fuel Availability	ERCs	ERCs	Cabrillo
South Bay (San Diego)	100 MW	Yes	Line Adjacent No gas			Fuel Availability	ERC		Duke
San Onofre (San Diego)		T-line constraint	Line Adjacent No Gas			Fuel Availability			SDG&E Pat Fleming 619 696 4031
Goal Line (San Diego)	50 MW	Yes	Line Adjacent No Gas			Fuel Availability	ERC	ERC	Cabrillo
Miramar (San Diego)	50 MW	Yes	Line Adjacent No Gas			Fuel Availability	ERC	ERC	Cabrillo
North Island (San Diego)	100 MW	Yes	Line Adjacent No Gas			Fuel Availability	ERC	ERC	Cabrillo
El Cajon (San Diego)			Line Adjacent No Gas			Fuel Availability			Cabrillo
Division (San Diego)			No Gas			Fuel Availability			SDG&E
NTC Central (San Diego)			No Gas			Fuel Availability			Dynergy
NTC Central (San Diego)			No Gas			Fuel Availability			Entergy SDG&E
Naval Station			No Gas			Fuel Availability			SDG&E
Luz SEGS VIII– Harper (San Bernardino)	250 MW	Onsite	Onsite	Uncertain	Yes	Potential transmiss. Constraints	Waive ERC requirement	-Turbine acquisition, -Building contractor	Darrel Grant, FPL 561-691-7099

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmiss. (voltage)	Natural Gas adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
Luz SEGS III-VII– Kramer (San Bernardino)	150 MW	Onsite	Onsite	Uncertain	Yes	Potential transmiss. Constraints	Waive ERC requirement	-Turbine acquisition, -Building contractor	Dave Rib, Plant Manager 760-762-5562 x246
AES Placerita (County?)	None	No.	Unknown	No turbine		Yes, t-line capacity	NA	NA	*Jennifer Lehmann, Plant Manager, (661) 254-8970 Ext. 104
Sycamore Cogeneration (county?)	Unknown, perhaps up to 50 MW	Onsite	Perhaps, especially in summer	No turbine Adequate acreage		Gas supply is key issue	-Payments	Gas supply, interconctn equipment	Gordon Thompson, Sycamore/Texaco, 661-392-2630
Watson Cogeneration (Kern)	80 MW	Onsite	Onsite	Uncertain		No	Waive ERC requirement	-Turbine acquisition -building contractor	Patrick King Exec Dir (310) 816-1721
Mountainview Power Company (San Bernardino)	100 MW	66 kV lines exist at the site.	Onsite – Capacity unknown	No turbine Adequate acreage	NA	No		-Permits -Payments	Tony Wetzel, Thermo Ecotek (916) 677-1717
Riverside Canal Power Company (San Bernardino)	50 MW	66 kV lines exist at the site.	Onsite.	No turbine Adequate acreage		No	-Permits -Payments		Tony Wetzel, Thermo Ecotek (916) 677-1717
Kern River (Kern)	Maybe 40 to 80 MW (LM6000s 40MW each).	None, T-line will not support.	Onsite	No turbine Adequate acreage		T-line constrained	Offset and tax relief	Permitting, construction equipment	Mervyn Soares, (661) 392-2643
Western Midway sunset (Kern)	45 MW	Onsite	Onsite	No turbine Adequate acreage		Project has to be removed in 2002		Mitsubishi transformer is needed	Ed Western

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmiss. (voltage)	Natural Gas adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
Sycamore (Kern)	No space available	None. T-line will not support		No turbine No space available		T-line constrained			Mervyn Soares, (661) 392-2643
El Segundo (Los Angeles)	No space available	Onsite	Onsite	No turbine No space available		Space constrained	None discussed	Obtaining space	Dan Ryser, President of Dynegy's Commercial Power division, in Houston, 310-615-6391
Wheelabrator Norwalk Energy Company	No space available			No turbine No space available		Space constrained			William Carlson, VP and GM, Alternate Energy Group, Wheelabrator Environmental Systems, Inc. (530) 365-9172
Harbor Cogeneration (Los Angeles)	Currently adding 30 MW under ISO's Program.	230 kV transmission lines.	Onsite	No turbine		ISO peaking project		Turbine acquisition	Scott Hawley, Harbor Cogeneration Company (949) 798-7921
San Gabriel Cogeneration (Los Angeles)	No space available			No turbine No space available		Space constrained	NA	NA	Scott Dibbs (Ripon Cogeneration, Inc. (713) 552-2139
Redondo Beach Generating Station	No space available	Onsite. 66 kV and 220 kV	Onsite	No turbine No space available		Yes, possible delay due to hazardous materials onsite	Permits for development of permanent plant.	-Permits -Equipment acquisition -Hazardous materials permits	*C. J. Thompson General Manager (310) 318-7442

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmiss. (voltage)	Natural Gas adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
Ormond Beach Generating Station (Ventura)	150 – 300 MW	Onsite. Four 220 kV circuits.	Onsite	No turbine Adequate acreage		Yes, time line is infeasible, no interest in short-term contract	Permits, a fair market based contract	-Permits -Equipment acquisition	Chris Allen, VP Power Development (713) 207-7441
Coolwater, Relient Energy, (Daggett)	300+ MW 212 Acres	Yes, Onsite two 220 kV circuits and one 115 kV.	Onsite.	No turbine Adequate acreage		Yes, time line is infeasible, no interest in short-term contract..		-Permitting -equipment acquisition	Relient Energy Chris Allen, VP Power Development (713) 207-7441
Mojave Cogeneration and Boran No. 1 (Kern)	Unknown	No. T-line is constrained.	Onsite	No turbine Adequate acreage		T-line constraint			Mojave Cogeneration Co., Robert Turner, Cogen Plant Manager, (760) 762-7333 Delta Energy Ken Smith (949) 650-6301
Inland Paperboard and Packaging (Ontario)	100 + MW 10-12 Acres	66 kV and 220 kV onsite	Onsite	No turbine Adequate acreage		No.	Arrangement with developer.	-Permits -Equipment acquisition	Inland Container Corporation (909) 292-1055 *Art Martin Engineering and Maintenance Manager (909) 292-7359
SmurfitStone (Vernon)	No	66 kV onsite	Onsite	No turbine Adequate acreage		No	NA	NA.	Smurfit Stone Corp. *Earl W. Dunsmoor Jr. General Manager (323) 583-3421

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmiss. (voltage)	Natural Gas adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
N.P. Cogeneration, Inc. (Los Angeles)	No space available.	Yes	They have a 6" line.	No turbine No space available		No space available			Charles Barlow Owners representative for N.P. Cogen Inc. (323) 724-7520
Carson Cogeneration Company (Los Angeles)	No space Available.			No turbine No space available		No space available			Larry Stoddard (949) 752-1997, Carson Cogen
Loma Linda University	50 MW	66 kV onsite	300 lb gas main (3 inches in diameter) onsite	No turbine Adequate acreage		Gas limited, expected to sell power to unvsty.			Loma Linda University Dana Beaman (909) 558-4559
Sithe Energies	~28 MW	Yes	Probably	Turbine available Adequate acreage	No		ERC flexibility	Air permit	Dave Thermansen 805-385-6375
Hueneme Paper Mill (Oxnard)	No space available	Transformer is limited	Gas supply is limited	No turbine No space available		Space, t-line & gas constraints.			Williamette Industries Inc. (805) 986-3881 Rudy Rehvein, Plant Manager *Charlie Wilson Plant Engineer
Long Beach (Los Angeles)	Very limited, probably < 5 MW	Onsite	Onsite	No turbine No space available	N/A	Space constraints & sensitive receptors nearby	N/A	N/A	Dan Ryser, President of Dynergy's Commercial Power division, , 310-432-5771
Developer Proposed Sites									
Northern California									
Proprietary (Monterey)	50-100 MW	115 kv onsite	Onsite	Maybe					Phil Consiglio (818) 842-2020

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmiss. (voltage)	Natural Gas adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
Reliant Colusa County	100+MW			No turbine Adequate acreage				-Site - equipment acquisition	Bob Mussetter (530) 473-2123
Remediation Inc. Multiple sites	No current sites			No turbine				Seeks DOD contaminate d sites for remediation and then generation	Tim Lewis (602) 238-9007
Proprietary (SF Bay Area)	135 MW	Yes may need minimal line	Yes may need minimal line	Turbine available Adequate acreage	Yes	No	Capacity payments energy payment based on fuel cost		Jim Macias, Calpine (925) 600-2306
San Jose DG at Multiple(Santa Clara)	54 MW(54 one MW rental turbines)			Rented from GE	CARB certified for one year operation			Developer working with City of San Jose	
Dairy 1 Central CA	49+ MW			No turbine Adequate acreage				Permitting	Hal Mitchell Sterling Energy (619) 252-0605
Dairy 2 Central CA	49+ MW			No turbine Adequate acreage				Permitting	Hal Mitchell Sterling Energy (619) 252-0605
Reliant (Colusa)	100+MW			No turbine Adequate acreage				Site definition and study and equipment	Bob Mussetter (530) 473-2123
Gaylord Container (Contra Costa)	No space available	Adjacent to PG&E owned Contra Costa Plant Switchyard	Onsite or very nearby	No turbine No space available	No	No space available	Site rental agreement		Gaylord Container Corp. Don Burkard, Area Managerof Power and Utilities (925) 779-4670

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmiss. (voltage)	Natural Gas adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
San Diego									
San Diego Kearney	50 MW	Yes	Onsite	Turbine available Adequate acreage	Yes, current permits	No		currently operating but not grid connected	Developer determining whether they will participate
Southern California									
Central CA, Location Proprietary	190 MW	adjacent	Yes	Turbine available Adequate acreage		No		appears to be discussing base load facility	Lloyd Prevost (818) 899-8682
Mojave Airport East Sn Bernardino	180 MW	No	Maybe	Turbine available Adequate acreage				Working with Phil Zimmerman	Lloyd Prevost (818) 899-8682
Gephart Rd Sn Bernardino	180 MW	No	Maybe	Turbine available Adequate acreage				Working with Phil Zimmerman	Lloyd Prevost (818) 899-8682
Mohave Cogen. US Borax Boron	50 MW	Maybe	Maybe	No turbine Adequate acreage				Not able to do on expedited time line. Very concerned about payments for current generation	Jay Rowland (714) 437-5036

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmiss. (voltage)	Natural Gas adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
Iliad Energy Harper Lake	80 MW –2001 750 MW – 2002	Yes	Yes	Turbine available Adequate acreage	Yes/No	No		Investigating possible options for 2001 peak project but interested in 2002 for long term contract	Michael Haws, President Iliad Energy (918) 493-4909
Oil and Gas Industry Sites									
Northern California									
Shell Martinez (Contra Costa)	40 MW	Yes	Yes	No turbine Adequate acreage			Waive air quality limits	Waiver; turbine availability	David Ayres (925) 313-3378
Valero Refinery (Benicia)	50-100 MW	Yes, adjacent substation	Yes-and some gas from refinery	No turbine Adequate acreage	Yes/Yes	No		Working with Calpine as partner	Richard Marcogliese (707) 745-7724
TOSCO Rodeo Refinery (Contra Costa)	No space available.	Onsite 110kV line	No	No turbine No space available		Space & gas constraints		-Permits -equipment acquisition -construction	Chaz Lemmon Tosco Natural Gas Supply Group (510) 245-4608
Ultramar Refinery (Martinez)	Working on peaking want 300 MW cogen			No turbine Adequate acreage					Jon Ballesteros (925) 372-3093

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmiss. (voltage)	Natural Gas adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
Richmond Refinery Cogen Chevron (Contra Costa)	50 to 100 MW	120 MW or more at 115 KV	Yes, 24" line into plant at 380 psi. Supply from PG&E is questionable	No turbine Adequate acreage		Possible gas constraint		-Permits, - equipment acquisition	*Barney Griffiths, Operations, (415) 894-7700 *Cary French, Engineering (510) 242-5340 Philis Enright Manager (510) 242-2533 Persons contacted Carol Guthrie (925) 842-5799
Equillon Martinez	100 MW or more	115 KV PG&E line is adjacent	Equillon believes adequate gas supplies are available from PG&E Pipelines.	No turbine Adequate acreage			Guaranteed profit margin of 20 to 25%. Approx. \$250 to \$750 per MWH.	-Payment guarantees -turbine availability -permitting	Janet Okio (925) 313-3102
Calif Oil Producers Electric Cooperative	200 to 300 MW at 43 unspecified sites	Information in mail on sites		No turbine Adequate acreage					Robert Fickes (562) 495-9354
Foster-Wheeler Martinez Cogen L.P. (Contra Costa)	300+ MW	230 KV transmission line may have limited capacity	PG&E main pipeline adjacent to plant site.	No turbine Adequate acreage		No	Payment guarantees and regulatory certainty that CPUC would not overturn.	Permits, Need one year to bring plant on-line	Phil Porter, Project Manager (925) 313-0800
San Diego									
Southern California									
Elk Hills Occidental (Kern)	45 MW	Yes	Yes	No turbine Adequate acreage		No		Turbine availability	Jeff Hanig (713) 215-7765

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmiss. (voltage)	Natural Gas adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
Aera Energy 5 sites	0 MW By 7/01	3-20 miles t-lines needed depends on site	3-20 miles gas line needed; var. by site	No turbine Adequate acreage		Yes, T-line & gas line constraint			
Berry Petroleum 1 (Kern)	50-100 MW	At site but unclear if capacity available	Yes	No turbine Adequate acreage		No	Cap on Natural Gas prices or contracts tied to NG price	Turbines	Tim Crawford (661) 769-2377
Berry Petroleum 2 (Kern)	50-100 MW	At site but unclear if capacity available	Yes	No turbine Adequate acreage		No	Cap on Natural Gas prices or contracts tied to NG price	Turbines	Tim Crawford (661) 769-2377
Occidental Kern Front (Kern)	0 MW by 7/01		2 miles to line	No turbine Adequate acreage		T-line and gas line make site infeasible this year			Jeff Hanig (713) 215-7765
Chevron - Lost Hills (Kern)	Unknown			No turbine Adequate acreage					Carol Guthrie (925) 842-5799
Nuevo Energy (Kern)	50-100 MW	Onsite	Yes	No turbine Adequate acreage		No		Turbine availability Has letter of intent for ~100 MW	Dale Harper (713) 374-4865
Texaco (Kern)	100 MW in 2001	Yes	Yes	Working with GE on LM 2500	Yes	No		Turbine availability	Paul Pilger (661) 864-3124
Stocker 1 (Los Angeles)	50-100 MW	Onsite	Yes	No turbine Adequate acreage		No	Natural Gas price is issue	Turbine and equipment acquisition.	Steve Rusch (323) 298-2223
Stocker 2 (Los Angeles)	50-100 MW	Onsite	Yes	No turbine Adequate acreage		No	Natural gas price is an issue	Turbine and equipment acquisition.	Steve Rusch (323) 298-2223
Stocker 3 (Los Angeles)	50-100 MW	Onsite	Yes	No turbine Adequate acreage		No	Natural gas price is an issue	Turbine and equipment acquisition.	Steve Rusch (323) 298-2223

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmiss. (voltage)	Natural Gas adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
Nuevo Energy (Orange)	50-100 MW	Onsite	Yes	No turbine Adequate acreage		No	Natural gas price is an issue	Turbine acquisition	Dale Harper (713) 374-4865
Nuevo Energy (Ventura)	50-100 MW	Onsite	Yes	No turbine Adequate acreage		No	Natural gas price is an issue	Turbine acquisition	Dale Harper (713) 374-4865
Thums / Occidental Port of Long Beach (Los Angeles)	50+MW (49.9) MW	Yes	Yes State Gas	No turbine Adequate acreage		No		Negative Declaration granted by City of Long Beach 2/01	Jeff Hanig (713) 215-7765
Venoco Santa Barbara	50-100 MW	Onsite	Onsite	No turbine Adequate acreage		No	NG rate	Turbine acquisition	Rod Eson (805) 966-9980
Chevron El Segundo	Unknown			No turbine Adequate acreage					Carol Guthrie (925) 842-5799
Seneca Beldridge									Kevin Ryan (661) 399-4270 x211
Venoco Ventura	50-100 MW	Onsite	Onsite	No turbine Adequate acreage		No	NG rate	Turbine acquisition	Rod Eson (805) 966-9980
Past Application Sites									
To avoid duplication, some of these sites are listed in other areas of this table									
Northern California									
Borden Chemical (Fremont)	100 + MW	1 mile	2 miles	No turbine 10 acres		Potential issues with local residents			AFC (Metcalf alternative 3)
SERRA Corp. (Fremont)	100 +	2.5 miles	Adjacent	No turbine 20 Acres					AFC (Metcalf alternative 4)

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmiss. (voltage)	Natural Gas adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
San Diego									
Southern California									
Local Government Proposed Sites									
Northern California									
City of Santa Clara Kifer Substation (Santa Clara)	50 MW	Yes	100 feet	No turbine Adequate Acreage		Site Not ready before 2002		Scheduled for 2002,	Ron Davis, Principal Consultant 916 961-5938
City of Santa Clara Scott Substation (Santa Clara)	100 MW	Adjacent	1,200 feet	No turbine Adequate Acreage		Site not ready before 2002		Scheduled for 2002,	Ron Davis, Principal Consultant 916 961-5938
City of Santa Clara Gianera Substation (Santa Clara)	100 MW	Adjacent	400 feet	2 LM6000 ordered, Delivery 4/01 Adequate Acreage	Yes	No	Expedite ARB/CEC permitting		Ron Davis, Principal Consultant 916 961-5938
Alameda Naval Air Station (Alameda)	50-100 MW	Yes	Yes	No turbine Adequate acreage		Requires agreement to end local load shedding	Financing		Cliff Hubbard pager 510 539 0138 Junona Jonas-Manager 510-748-3905
City of Redding	43 MW in process. Additional 50-100 MW	Yes	Yes	Turbine available Adequate acreage		No	Waiting for ARB permits	Permitting and building	Pat Keener 530 245 7244
Yurok Tribe Northern CA			Tribal land is not currently served by transmission			No T-line		Wants to develop generation for tribe	

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmiss. (voltage)	Natural Gas adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
Roseville	Up to 500 MW planned	Needs more	Needs new pipeline	In preliminary design phase		T-line and gas line constraints			
Lodi	50 MW	Yes	Yes	No turbine Adequate acreage		No	Negotiable		Dixon Flynn/ 209 333-6700
Lodi	500 MW future available	Limited	Limited	No turbine Adequate acreage		No	Help expediting gas pipeline		Dixon Flynn/ if out ask for cell phone number 209 333-6700
City of Shasta Lake (Shasta)	30 MW	Yes	Yes	Plans to purchase 15 MW units		No	Capital and technical assistance		Ron Davis 916 961 5938
Susanville (Shasta)	50-120 MW	Yes	Yes	No turbine Adequate acreage		No	Need capital or credit help		John Baxter 530 257-6882
San Diego									
Southern California									
Pitchess Cogeneration - Pitchess Honor Farm (Los Angeles)	50 MW	Yes, 66kV	Onsite	No turbine Adequate acreage		No		-Permits -equipment acquisition	*Howard Choy Director of Energy Management (323) 881-3939 *Jim Van Zuilen Manager of Power Plants (323) 267-2254
Civic Center Cogeneration (Los Angeles)	38 MW		There is a 130 psi pipeline onsite.	No turbine Adequate acreage		No			Jim Van Zuilen, Manager of Power Plants, Los Angeles County (323) 267-2254

Site (County or City))	Potential Peaking Capacity at Site	Distance from adequate transmiss. (voltage)	Natural Gas adequacy (Distance from site)	Is a turbine available? Site acreage available?	Can the turbine meet 25 ppm Nox? Are offsets available?	Are there any fatal flaws with using the site?	Incentives that would help development	What are the critical path items?	Contact
UCLA Cogeneration (Los Angeles)	~15 MW	34.5 kV transmission lines	Onsite	No turbine Adequate acreage		Yes, community resistance			Dave Johnson, Director of Energy Services at UCLA (310) 825-3402
Southwest Transportation Agency						LNG Facility			Kirk Hunter, Director (559) 867-3536
State Owned Sites									
Northern California									
San Diego									
Southern California									
Other Government Owned Sites (military)									
Northern California									
Moffett Field (San Mateo)	100-200 MW	Onsite. Circuit breakers may need replacing	~ ¼ miles away	No turbine		Circuit Breakers may take 1 year to replace			Steve Frankel Energy Manager 650.604.4214 NASA
San Diego									
Southern California									

APPENDIX A

GENERATING UNIT CHARACTERISTICS

	New 500 MW Combined Cycle Combustion Turbine	New 50 MW Simple Cycle Combustion Turbine	Used 50 MW Simple Cycle Combustion Turbine	Internal Combustion (Diesel) Engine
Use	Baseload Energy & Capacity	Peaking Power	Peaking Power	Peaking Power (up to 10 MW)
Technology	"F-Class" Combustion Turbines	Aeroderivative Combustion Turbine	"B-Class" or Aeroderivative Combustion Turbine	Reciprocating Diesel Engine
Fuel	Natural Gas	Natural Gas	Natural Gas	Diesel or Nat Gas
Capital Cost	\$350-400 million	\$50 million	\$40 million	\$350/kW to \$1,000/kW
Fuel Use	70 billion BTU/day	2,400 million BTU/day	3,000 million BTU/day	
Efficiency	53 – 58 % LHV ¹	38 % LHV	35 % LHV	28 % to 43 % HHV
Reliability	92 – 98 % Availability	95+ % Availability	90+ % Availability	99+ % Availability
Transmission	115 – 230 kV	None (if located at a substation)	None (if located at a substation)	None (if located at a substation)
Fuel Supply	16 – 24-inch diameter pipeline	6-inch diameter pipeline	6-inch diameter pipeline	Diesel tank truck or small diameter natural gas pipeline
Air Emissions	2 ½ ppm NOx with SCR	3 ppm NOx with SCR, 25 ppm without	5 ppm Nox with SCR, 25 ppm without	25-500 ppm Natural Gas, 300-3000 ppm Diesel
Water Supply	2,800 acre-feet/year ²	Minimal	Minimal	Minimal
Water Discharge	0 – 550 million gallons/day ³	Negligible	Negligible	Negligible
Land Requirements	10 – 18 acres	1-2 acres	1-2 acres	1 acre
Noise	Mitigated as required	Mitigated as required	Mitigated as required	Mitigated as required
Hazardous Materials	Yes, NH3, Acids, Caustics, H2	Yes, NH3, Acids, Caustics, H2	Yes, NH3, Acids, Caustics, H2	Diesel storage

¹ Lower Heating Value, is a measure common in the combustion turbine industry. Equivalent to 48 – 52 percent HHV (Higher Heating Value) (assuming natural gas fuel), the measure common to the remainder of the power industry.

² Assumes wet cooling tower, and evaporative cooling or fogging of combustion turbine inlet air.

³ Lower number assumes "zero discharge" system.

APPENDIX B

NATURAL GAS AVAILABILITY FOR POTENTIAL PEAKING POWER PLANTS

The Energy Commission staff has identified potential new combustion turbine peaking power plants in California that are available in the near term and meet specified Energy Commission criteria. These power plants would be natural gas-fired. One criterion is if there is sufficient natural gas availability using existing natural gas pipelines.

To determine if enough natural gas would be available¹, it is necessary to calculate the total gas consumption from these potential power plants. With this information, along with power plant locations, pipeline capacity needs to be investigated. This information is compiled and explained below.

The potential new peaking power plants would be located in areas facing electricity supply constraints. Potential locations include the San Francisco Bay Area, the Central Valley, the Los Angeles area, and San Diego². Assumed typical power plant characteristics are shown in Table 1. These assumed plants each have a capacity of 50 megawatts (MW), a fuel use rate of 2,350 million British thermal units (mmBtu) per day, and supply electricity for 2,000 hours per year or about 6 hours per day. Each plant would consume about 192 million cubic feet per year (mmcf/yr.) of natural gas using a heat content of 1,020 mmBtu per million cubic feet of natural gas.

APPENDIX B TABLE 1

**ASSUMED NEW COMBUSTION TURBINE NATURAL GAS-FIRED
PEAKING POWER PLANT CHARACTERISTICS**

Generating capacity (MW)	Fuel use (million Btu/day)	Mmcf per mmBtu	Hours of use per year	Hours of use per day
50	2,350	0.00098	2,000	6

Table 2 shows the assumptions about plant locations, number of plants that meet the Energy Commission criteria, and how much natural gas they would consume. With each plant producing electricity for 2,000 hours per year, and averaging about 6 hours per day of operation during the summer, they would consume about 5,760 mmcf/yr.

¹ It is assumed that the natural gas commodity is available from various production regions. The regions that supply natural gas to the State include production from California, Southwestern U.S., the Rocky Mountains, and Canada.

² No plants are located in San Diego. This assertion is explained in the text below.

APPENDIX B TABLE 2

ASSUMED NUMBER OF POWER PLANTS AND LOCATION

Location	Number of power plants	Total natural gas use (mmcf/yr.)
San Francisco Bay Area	10	1,920
Central Valley	10	1,920
Los Angeles area	10	1,920
San Diego	0	0

In determining the natural gas utilities' ability to serve these power plants, spare pipeline capacity must be examined. Both backbone (large pipelines taking natural gas from the California border entry points) and local transmission pipeline capacity need to be considered.

APPENDIX B TABLE 3

POWER PLANT LOCATION AND POTENTIAL GAS USE

Location	Peak day gas use (mmcf/d.)
San Francisco Bay Area	23.0
Central Valley	23.0
Los Angeles area	23.0
San Diego	0

PACIFIC GAS AND ELECTRIC SERVICE AREA

The Pacific Gas and Electric (PG&E) backbone pipeline system serves both the San Francisco Bay Area and Central Valley locations and appears to have capacity to serve the potential power plants. Total peak day gas use at these two locations would consume about 46 million cubic feet per day (mmcf/d.) (see Table 3).

Subtracting annual average daily demand from total backbone pipeline capacity will indicate how much spare backbone pipeline capacity is available to serve these potential power plants. The total pipeline capacity is about 2,995 mmcf/d.³ Using forecasted 2001 **annual average daily demand** during a cold temperature year⁴, total gas send out is 2,691 mmcf/d. This results in spare backbone pipeline of 304 mmcf/d. As seen in table 3, total peak day gas use for the San Francisco Bay Area and the

³ 2000 *Natural Gas Market Outlook*, California Energy Commission

⁴ The cold-year temperature scenario assumes a cold winter and cool summer resulting in higher demand than that of an average-year temperature. 2000 *California Gas Report*, prepared by the California Gas Utilities

Central Valley is about 46 mmcf. Consequently, enough spare backbone pipeline capacity (304 mmcf.) is available to serve these potential peak power plants (46 mmcf.) located in both the San Francisco Bay Area and the Central Valley.

In addition to spare backbone pipeline capacity, the local gas distribution pipeline system should be examined. For the assumed San Francisco Bay Area power plants, recent analysis by PG&E has indicated that the local distribution system within the San Francisco Peninsula and Central Coast can meet all current natural gas load under system average temperatures of 38 degrees Fahrenheit. This cold temperature scenario typically occurs about one in four years.

Under these same load conditions, PG&E has shown that the Central Valley region can also be served. However, under very cold temperature days, PG&E has illustrated that noncore customers, including current electric generation load, cannot be served at 100 percent. Any additional natural gas load from potential peak power plants during very cold winter days cannot be served.

If these peak power plants are likely be used during the summer months when natural gas load typically falls from higher winter use, the risk of PG&E not being able to serve these power plants is further lessened.

SOUTHERN CALIFORNIA GAS COMPANY SERVICE AREA

To indicate if spare backbone pipeline capacity exists in the Los Angeles area to serve the potential peak power plants, the same methodology indicated above will be used. In the Southern California Gas Company (SoCalGas) utility area, about 3,500 mmcf.⁵ of takeaway backbone pipeline capacity exists. Using the *2000 California Gas Report* again, forecasted 2001 **annual average daily demand** during a cold temperature year is 2,886 mmcf. Consequently, about 614 mmcf. of spare capacity is available on the backbone pipeline. This is more than enough backbone pipeline capacity to serve the peak daily gas use of 23.0 mmcf. for these potential peak power plants.

Local distribution pipeline capacity appears to be adequate to serve the additional load of these power plants according to SoCalGas⁶. However, certain regions in the SoCalGas service area are constrained. These include the Imperial Valley and San Joaquin Valley near Visalia. The ten potential peak power plants would be located in the Los Angeles area, east of Los Angeles towards the desert, and in Santa Barbara, and do not fall in the supply-constrained regions. However, each potential peak power plant site should be assessed on a case-by-case basis with the gas utility.

⁵ Personal communications with Steve Watson at Southern California Gas Company, February 15, 2001.

⁶ Personal communications with Steve Watson at Southern California Gas Company, February 15, 2001.

SAN DIEGO GAS AND ELECTRIC

The San Diego area has been identified as an area where peak electrical demand may best be served in the next 12 months. The criteria set up by the Energy Commission has identified that the supply of natural gas in San Diego is very limited and makes all potential sites in the area questionable. This problem is evidenced, for example, by the January 16, 2001 natural gas curtailment affecting the power plants at Ensenada and Rosarita.

Other issues arise on a case-by-case basis for siting potential power plants on local transmission systems. In some cases, these potential power plant locations may need new pipeline installed. The distance for new pipeline will affect the costs of siting these power plants. When an existing local transmission pipeline does exist at the potential power plant site, characteristics of the pipeline need to be considered. These include if the pipeline pressure and flow capacity are high enough to meet the potential power plants needs. Typically, the gas utilities provide a service that reviews power plant natural gas needs and identify any of these, or other, possible issues.